UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,911	07/11/2001	Siegfried Luft	04906.P040	1859

7590 11/04/2004	EXAMINER
Andre M. Gibbs	BULLOCK JR, LEWIS ALEXANDER

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ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/903,911	LUFT, SIEGFRIED
		Examiner	**Art Unit**
		Lewis A. Bullock, Jr.	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL.**　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-50* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *11 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☐ All　b)☐ Some * c)☐ None of:
　　　1.☐ Certified copies of the priority documents have been received.
　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/11/01*.
4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because of Draftperson's Review. Applicant is advised to employ the

services of a competent patent draftsperson outside the Office, as the U.S. Patent and

Trademark Office no longer prepares new drawings. The corrected drawings are

required in reply to the Office action to avoid abandonment of the application. The

requirement for corrected drawings will not be held in abeyance.

Information Disclosure Statement

2.   The information disclosure statement filed 7/11/01 fails to comply with 37 CFR

1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each

publication or that portion which caused it to be listed; and all other information or that

portion which caused it to be listed. It has been placed in the application file, but the

information referred to therein has not been considered. There was no copy of the

references for the information not initialed.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-4, 7, 8, 12-19, 23, 25, 32-43, 48, and 50 are rejected under 35 U.S.C.

103(a) as being unpatentable over "An Approach for Mobile Agent Security and Fault

Tolerance using Distributed Transactions" by VOGLER in view of "Solve Real Problems

with aglets, a type of mobile agent" by VENNERS.

As to claims 1, 16, 17, 23 and 43, VOGLER teaches a coordinator transaction

agent (mobile agent) capable of communication with a network element (target host) by

causing itself to be replicated onto the network element (via sending a copy of the agent

to the new host), causing an indication of that replication to be communicated back to

the transaction agent (via the target host initializing the agent and acknowledge the

receipt), and coordinating operations of a task in the replicated transaction agent to

implement while receiving an indication of the completion of the operation (via initiating

the 2PC protocol to conclude the transaction) (pg. 270-271) . However, VOGLER does

not teach that the agent includes an itinerary and a state machine wherein the itinerary

indicates a plurality of network elements wherein the coordinator agent coordinates

operations on the plurality of state machines.

VENNERS teaches that mobile agents (aglet / mobile agent) maintain a state

machine (artificial intelligence / state) (pg. 2, "Aglets can potentially be endowed with

artificial intelligence....and continue execution at another host.") have an operation of

cloning themselves and use an itinerary (pg. 3, "One of the main differences between

mobile code, such as applets, and mobile agents is itinerary...") wherein the itinerary

indicates a plurality of network elements (many sites) wherein the coordinator agent

coordinates operations on the plurality of state machines (via parallel processing) (pg. 5,

"Given that mobile agents can move from node to node and can spawn subagents, one potential use of mobile agent technology is as a way to administer a parallel processing job..."). It would be obvious to one skilled in the art that the mobile agent of VOGLER would create a sub-agent of itself and send that agent to the remote host in order to perform a parallel operation. Therefore, it would be obvious to combine the teachings VOGLER with the teachings of VENNERS in order to facilitate the total migration of agents in a network with their state.

As to claims 2 and13-15, VENNERS teaches mobile agents (aglet / mobile agent) maintain a state machine (artificial intelligence / state) (pg. 2, "Aglets can potentially be endowed with artificial intelligence....and continue execution at another host.") have an operation of cloning themselves and use an itinerary (pg. 3, "One of the main differences between mobile code, such as applets, and mobile agents is itinerary...") wherein the itinerary indicates a plurality of network elements (many sites) wherein the coordinator agent coordinates operations on the plurality of state machines of sub-agents (via parallel processing) (pg. 5, "Given that mobile agents can move from node to node and can spawn subagents, one potential use of mobile agent technology is as a way to administer a parallel processing job..."). VOGLER teaches mobile agents clone themselves to other computers (pg. 270-271). Therefore, it would be obvious based on the combination that mobile agents are capable of replicating to any number of network elements (hosts).

As to claims 3, 4, 7, 8, 12, 18, 19, 25, 32-42, 48 and 50, VOGLER teaches performing a distributed transaction among hosts by cloning an agent and performing the operation according wherein the transaction is concluded by a two phase commit protocol (pg. 270-271). VENNERS teaches Java mobile agents are capable of performing transactions regarding data collection, searching and filtering, monitoring, target information dissemination, negotiating, bartering, parallel processing, and entertainment (pg. 3-5). Official Notice is taken in that it is obvious and well known to one skilled in the art that a two phase commit protocol autonomously rolls back or indicates success in a lock step in order to complete a transaction.

5.   Claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over VOGLER in view of VENNERS as applied to claim 1 above, and further in view of Applicant's Admitted Prior Art (APA).

As to claims 5, 6, 9-11, 20-22, 24, 26-31, 44-47 and 49, VOGLER teaches performing a distributed transaction among hosts by cloning an agent and performing the operation according wherein the transaction is concluded by a two phase commit protocol (pg. 270-271). VENNERS teaches Java mobile agents are capable of performing transactions regarding data collection, searching and filtering, monitoring, target information dissemination, negotiating, bartering, parallel processing, and entertainment (pg. 3-5). Official Notice is taken in that it is obvious and well known to one skilled in the art that a two phase commit protocol autonomously rolls back or indicates success in a lock step in order to complete a transaction. However, neither

VOGLER not VENNERS teaches that the mobile agents are used to enable or disable a cross connection. APA teaches that transactions are typically performed by a user to enable and disable cross connections (pg. 1-2, paragraphs 4-6). Therefore, it would be obvious to one skilled in the art at the time of the invention that since transactions are performed by mobile agents, users would use mobile agents to perform cross connections. Therefore, it would be obvious to combine the teachings of VOGLER with the teachings of VENNER and APA in order to facilitate the autonomous performance of cross connection of network nodes.
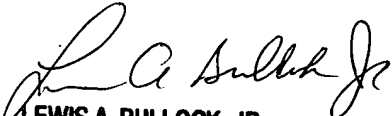
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm. In late-October, the examiner can be reached on (571) 272-3759.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. In late-October, the examiner's supervisor can be reached on (571) 272-3756.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER

September 29, 2004